The present invention relates to improved semi-allogeneic immunogenic cells which act to stimulate and induce an immunological response when administered to an individual. In particular, it relates to cells which express both allogeneic and syngeneic MHC determinants and which also express at least one antigen recognized by T lymphocytes. The invention is also directed to methods of inducing an immune response and methods of treating tumors by administering the semi-allogeneic immunogenic cells to an individual.